

CLAIMS

I claim:

1. Planar broadband patch antenna, in particular for transmitting and/or receiving digital and/or analogue terrestrial television UHF/SHF signals, comprising a

bandwidth low frequency tuned reflector (2) and a radiator (3) connected to a specific power supply (4) and radiating in a frequency F1, this radiator (3) further having a slot (7) tuned to a frequency F2, characterized in that the radiator (3) also comprises at least

another slot (8) tuned to a frequency F3 different from the frequencies F 1 and F2, these slots (7, 8) being connected through a connecting slot (9) designed capable of forming a strip line coupling, in order to ensure an electromagnetic current in each of these slots (7, 8) of frequency F2 and F3.

2. Planar patch antenna according to claim 1, characterized in that the slots (7, 8) are defined of different sizes, in order to ensure their radiation at different frequencies F2 and F3.

3. Planar patch antenna according to claim 1 or 2, characterized in that the radiation at different frequencies F2 and F3 of the slots (7, 8) is ensured through a specific power supply (4) to the radiator (3) in an unsymmetrical way between said slots (7, 8).

4. Planar patch antenna according to any of the preceding claims, characterized in that it includes, arranged above the radiator (3) and parallel to the latter, at least one parasitic element (10) with smaller dimensions, for a widening of the bandwidth in the upper portion of the band.

5. Planar patch antenna according to any of the preceding claims, characterized in that the reflector (2) has at least two of its opposite peripheral edges (5, 6) folded in a plane which is perpendicular to it, in the direction towards the radiator (3).

6. Planar patch antenna according to claim 5, characterized in that the opposite peripheral edges (5, 6) folded in the direction towards the radiator (3) are those intersecting the plane of polarization (P_m) of the latter.

7. Planar patch antenna according to claim 5 or 6, characterized in that the peripheral edges (5, 6) of the reflector (2) are located at a distance (d) smaller than the distance (p) which is the one separating the plane of this reflector (2) with respect to that of said radiator (3), in order to load the latter and to ensure a lowering of the low radiation frequency of the antenna (1).